REMARKS

This application has been reviewed in light of the Office Action dated October 30, 2008. Claims 1–19 are pending in the application. No new matter has been added.

Claims 1–7 stand rejected under 35 U.S.C. § 112, second paragraph, as being vague and indefinite. In particular, the Examiner asserts that the language reciting "provides a code tracking adjustment signal" and "provides a filter coefficient" in claim 1 is vague and indefinite because they are not used by any element recited in the claim. However, MPEP § 2173.02, citing *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 806 F.2d 1565, 1576 (Fed. Cir. 1986), states that, "The test for definiteness under 35 U.S.C. 112, second paragraph, is whether 'those skilled in the art would understand what is claimed when the claim is read in light of the specification.'" It is respectfully asserted that a person having ordinary skill in the art would be able to comprehend how these elements are to be used within the context of the invention.

The present invention discloses a method and system for "gear shifting" loop filter coefficients in a code-tracking system. The output of such a system is adjustment information designed to synchronize a receiver's lock to a signal. The Examiner asserts that "a code tracking adjustment signal" is vague and indefinite, but Fig. 2 of the present specification demonstrates that the code tracking adjustment signal is generated by the error scaling device, and is not used by any other element of the system. A person having ordinary skill in the art would know that the code tracking adjustment signal is the final output of the code-tracking system, and there is no need for any internal element to make use of it.

In addition, the "filter coefficient" also has a clear purpose in the context of a code-tracking system. The loop filter makes use of a filter coefficient to determine how large its steps should be in acquiring a lock on a signal. This is clearly shown in Figs. 2 and 3 of the present specification, and would be understood by one having ordinary skill in the art. Although it is believed that the claim language as presented is clear, Applicants amend claim 1 to explicitly state that the loop filter receives filter coefficients. It is believed that claim 1 as amended is clear, and that these arguments and amendments overcome the Examiner's rejection. Reconsideration of the § 112 rejection is respectfully requested.

Claims 1–19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Publication No. 2004/0088609 to Eckhardt et al. in view of U.S. Patent Publication No. 2004/0044713 to Healey et al.

Claim 1 recites, inter alia, "an error scaling device, which receives the loop filter error representing an update and provides a code tracking adjustment signal." The Examiner asserts that element 330 of Eckhardt discloses the claimed scaling device. However, element 330 of Eckhardt is itself a loop filter, and its output goes to element 300, an interpolation filter. Nowhere does Eckhardt make any mention of scaling the loop filter's output to generate a code tracking adjustment signal, and element 330 certainly does not have that function. *See* Eckhardt, ¶¶ 41, 43. Eckhardt therefore does not disclose an error scaling device, either separately or as part of the loop filter.

Furthermore, Healey cannot cure the deficiencies of Eckhardt. A glance at Fig. 1 of Healey shows that the output of the filter does not pass through any intermediate device at all, let alone an error scaling device. Furthermore, there is no discussion whatsoever in Healey

regarding the scaling of a filter's output. As a result, it is respectfully asserted that Eckhardt and/or Healey, taken alone or in combination, fail to disclose or suggest an error scaling device which receives the loop filter error and provides a code tracking adjustment signal.

Claim 1 further recites "a controller which monitors at least one of a frequency of updates and a number of same direction updates." The Examiner concedes that Eckhardt does not disclose this element, but asserts instead that Healey discloses it. The Examiner seems to point to Healey's use of "pseudo-error counts" to show that Healey covers the claim language. However, Healey's pseudo-error counts can in no way be interpreted to mean the same thing as a "frequency of updates" or a "number of same direction updates." That is because Healey *does not count updates at all.* The pseudo-error counts are just that: Healey keeps track of how many times the difference between an input and output signal falls within a certain range, calling such instances "pseudo-errors." *See* Healey, ¶ 15. Healey does not keep track of how frequently it updates the receiver's code reference, or how many times it has done so in a single direction — it simply counts "pseudo-errors" and makes its decisions based on them. *See* Healey, ¶ 36. Indeed, if the pseudo-errors were truly "updates" as recited by claim 1, it would result in a circular definition where Healey makes updates based on the count of those same updates. *See* Healey, ¶¶ 35–36. Because these pseudo-errors bear no resemblance to the updates the present invention, it is respectfully asserted that Eckhardt and/or Healey, taken alone or in combination, fail to disclose or suggest a controller which monitors a frequency of updates or a number of updates in a same direction.

Claim 1 further recites, "a controller which . . . provides a filter coefficient (K) in accordance with at least one of the frequency of updates and the number of same direction

updates." The Examiner concedes that Eckhardt does not disclose this element, but asserts instead that Healey does disclose it. However, as discussed above, Healey does not deal in any way with a frequency of updates or a number of same direction updates. Therefore Healey cannot provide filter coefficients in accordance with such information. It is respectfully asserted that Eckhardt and/or Healey, taken alone or in combination, fail to disclose or suggest a controller which provides filter coefficients in accordance with a frequency of updates or a number of same direction updates.

For at least the above reasons, it is believed that Eckhardt and/or Healey, taken alone or in combination, do not disclose or suggest all of the elements of claim 1.

Claim 8 recites, inter alia, "modifying a count after each update of a loop filter output" and "if the count does not exceed the user-defined threshold . . . changing loop filter coefficients to synchronize received signals." Claim 14 recites, inter alia, "modifying a count after a number of same direction updates of a loop filter output" and "if the absolute value exceeds the user-defined threshold, changing loop filter coefficients." Both claims therefore deal with keeping a count of a number of updates or a number of same-direction updates, and both change loop filter coefficients based on those counts. As discussed in detail above with regard to claim 1, the Examiner concedes that Eckhardt does not disclose these elements, and Healey does not disclose or suggest keeping a count of updates at all, instead relying on an unrelated count of "pseudo-errors." For at least the above reasons, it is respectfully asserted that Eckhardt and/or Healey, taken alone or in combination, fail to disclose or suggest all of the elements of claims 8 and 14.
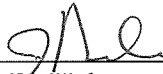
In light of the above, it is believed that claims 1, 8, and 14 are in condition for allowance. Furthermore, because claims 2–7, 9–13, and 15–19 depend from claims 1, 8, and 14 respectively, it is believed that they are also in condition for allowance. Reconsideration of the §103(a) rejection is respectfully requested.

In view of the foregoing, Applicant respectfully requests that the rejections of the claims set forth in the Office Action of October 30, 2008 be withdrawn, that pending claims 1–19 be allowed, and that the case proceed to early issuance of Letters Patent in due course.

It is believed that no additional fees or charges are currently due. However, in the event that any additional fees or charges are required at this time in connection with the application, they may be charged to Applicant's representatives Deposit Account No. 07-0832.

Respectfully submitted,

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